Abstract of the Disclosure

When designing an optical system having a surface with a film formed thereupon, the optical system is first designed in conformance to predetermined specifications without taking into consideration the presence of the film and its optical wavefront is calculated (S10). Next, the film to be formed is set, the optical system including the film is designed and its optical wavefront is calculated (S20). The results of the calculation performed in step S10 are compared with the results of the calculation performed in step S20 (S30). If the wavefront aberration calculated in S20 is less significant than the wavefront aberration calculated in S10, the results of the calculation performed in S20 are approved as the design solution, and the next stage of design study begins. If, on the other hand, the wavefront aberration calculated in S20 is more significant than the wavefront aberration calculated in S10 (S40), the operation returns to S20 to redesign the optical system including the film. By adopting the method described above, it becomes possible to assure the required optical performance level by taking into consideration the presence of the film in the optical system having a surface with a film formed thereupon.